

REMARKS

Claims 1 to 22 and 24 are pending in the application, of which claims 1, 13 and 24 are independent. Favorable reconsideration and further examination are requested.

In the Office Action, claims 1 to 6, 8 to 12, 21 and 22 were rejected over U.S. Patent No. 6,188,307 (Katsuki); claims 13 and 15 to 20 were rejected over U.S. Patent No. 5,867,083 (Takeuchi) in view of Katsuki; and claim 14 was rejected over Katsuki in view of U.S. Patent No. 6,188,307 (Smith).

As shown above, independent claims 1 and 13 have been amended to clarify that the housing has an upper side that protects the first electrical component and the second electrical component from the contact voltage. The applied art is not understood to disclose or to suggest this feature of the claims.

As previously explained, Figs. 4 and 5 of Katsuki show an insulating case 21, two PTC-thermistor elements 25, 26, two protruding terminals 30, 31, and two spring terminals 32, 33. Spring terminals include electrodes 32a, 33a, which are on the upper side of the thermistor apparatus, and thus cover the openings of cavities 21a and 21b. Thus, Katsuki's insulating case contains areas that expose electrodes 32a and 33a, which pass a contact voltage to thermistor devices 25 and 26 (the alleged counterpart to the claims' first and second electrical components). Accordingly, Katsuki's insulating case does not protect the first electrical component and the second electrical component from the contact voltage.

For at least the foregoing reasons, Applicants submit that claims 1 and 13 define over Katsuki. Page 6 of the Office Action admits that Takeuchi does not disclose a housing;

therefore, Takeuchi does not make up for the foregoing deficiencies of Katsuki vis-à-vis claims 1 and 13. Accordingly, claims 1 and 13 are believed to be allowable.

Independent claim 24 recites that the housing comprises a liquid crystal polymer (LCP) material. Applicants have not amended claim 24, since Applicants believe claim 24 to be patentable as it stands for at least the reasons explained below.

In this regard, in order to support an obviousness rejection based on a combination of references, there must be some motivation in the references themselves or in the knowledge available to those of skill in the art to make the combination. In this case, the devices described in Katsuki and Bach are completely different, and in completely different technology areas. The Katsuki device is a thermistor apparatus that is used for “protecting communications equipment such as telephone exchanges from overcurrent”. By contrast, the Bach device is an electrical temperature measuring device containing a temperature sensor housed in a protective tube. Give that the Bach device is directed to temperature measurement and that the Katsuki device is directed to overcurrent protection, Applicants submit that there is no motivation whatsoever to incorporate features of Bach – notably, the liquid crystal polymer material of its housing 15 – into Katsuki. This is particularly true in view of the fact that the liquid crystal polymer material is not used in Bach for overcurrent protection, but rather is used in Bach for its thermal and mechanical properties, as described in the excerpt below:

[0029] The excellent flow properties permit thin-walled profiles and bur-free fabrication with injection molding. The material exhibits high notch-impact strength and high resistance against corrosion by chemicals as well as low water absorption. It also has high thermal stability, which permits the high application temperatures.

For at least the foregoing reasons, Applicants respectfully submit that there was not motivation to combine Katsuki and Bach in the manner suggested in the Office Action. Accordingly, the rejection is believed to be improper as a matter of law.

Furthermore, the protective mechanism described in Bach is not its housing 15, but rather its protective tube 5, which is made of metal. Accordingly, even if it were proper to combine Bach with Katsuki in the manner suggested in the Office Action (a point which Applicants dispute above), at best Bach would suggest including metal (the material of protective tube 5), not liquid crystal polymer, in the Katsuki apparatus.

For at least the foregoing reasons, claim 24 is believed to be patentable over the art.

Each of the dependent claims is also believed to define patentable features of the invention. Each dependent claim partakes of the novelty of its corresponding independent claim and, as such, has not been discussed specifically herein.

It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

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In view of the foregoing amendments and remarks, Applicants respectfully submit that the application is in condition for allowance, and such action is respectfully requested at the Examiner's earliest convenience.

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Respectfully submitted,

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